

REMARKS

Claims 1-2, 7-10, 13-19, and 23-26 were rejected under 35 USC 103(a) over Siol (US5,380,797). The rejection is traversed for the following reasons.

Siol discloses a polymer blend containing at least two-phase polymers P1 and P2, which in turn containing at least one hardness toughening phase A1 or A2 and at least one hardness phase B1 or B2 (abstract; column 2, line 55+). The toughening phase A1 or A2 is the elastomer chosen from, among others, polyacrylates (column 3, lines 21-29) and the hardness phase B1 includes polyalkylene terephthalate (column 6, lines 44-47).

The polyacrylates can be produced by emulsion polymerization (column 4, line 59+). As the examiner noted in column 5, lines 13-37, peroxides are used as *polymerization initiator* (column 5, line 17). Siol therefore discloses a toughened rigid thermoplastic, not a flexible elastomer.

That is, the peroxides noted by the examiner are for initiation of polymerization for producing a polyacrylate, which, among others, is referred to as toughening phase A1 or A2 in Siol.

Toughening A1 or A2 is then covalently bonded to a portion of the hardness phase (column 5, lines 5-11) by *grating* (column 6, line 8). Siol discloses that a polyacrylate is covalently bonded to a polyalkylene terephthalate by *grafting*.

The claimed invention, of which claim 1 is representative, calls for a . . . blend comprising, . . . a polyalkylene phthalate . . . and a crosslinkable poly(meth)acrylate . . . or polyethylene/(meth)acrylate in combination with . . . peroxide . . . and an organic diene co-agent to cross-link the poly(meth)acrylate or polyethylene/(meth)acrylate *during extrusion or injection molding* of the curable thermoplastic elastomeric blend (*italics added*).

To the contrary, Siol does not suggest that the covalent bonding (i.e., grafting) of toughening phase A to hardness phase B is in the presence of a crosslinking agent which crosslinks the blend *during extrusion or injection molding* of a curable thermoplastic elastomeric blend.

As to claim 16, the examiner asserted that Siol teaches the toughening phases are crosslinked after being combined with the hardness phases in an extruder, citing Siol, column 9, lines 61-68 and column 10, lines 1-22.

Applicants disagree.

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The examiner is respectfully directed to column 9, lines 61-64, where Siol discloses in a preferred embodiment that the toughening phase A is *first* crosslinked with peroxide polymerization initiator (*italics applicants'*).

To the contrary, claim 16 specifically calls for adding and admixing a cross-linkable poly(meth)acrylate or polyethylene/(meth)acrylate vulcanizate rubber, a peroxide free-radical initiator and an organic diene co-agent . . . *at a temperature insufficient to promote cross-linking*; adding a polyalkylene phthalate . . . with said cross-linkable poly(meth)acrylate or polyethylene/(meth)acrylate vulcanizate rubber *prior to cross-linking*, further mixing . . . at conditions and temperature *sufficient* to cross-link . . . ; and . . .

Claim 16 specifically requires no crosslinking until both polymers are mixed together.

Furthermore, Siol does not disclose or suggest the element recited in claim 16, which calls for recovering a melt processible thermoplastic elastomeric composition comprising from 15 to 60 weight % of said polyalkylene phthalate polyester polymer or copolymer as a continuous phase and from 40 to 85 weight percent of said poly(meth)acrylate or polyethylene/(meth)acrylate vulcanizate rubber cross-linked with said peroxide free-radical initiator and said organic diene co-agent as a disperse phase.

As for claim 7, Siol does not suggest the blend.

For claims 13-15 and 22, because Siol does not disclose or suggest the blend, the recited properties are further limitations to the claims from which these claims depend.

Accordingly, Siol does not render the claimed invention obvious.

Claims 5, 11, 20, and 27 were rejected under 35 USC 103(a) over Siol and Aishima (US3,926,873). The rejection is also traversed.

First, Aishima does not disclose or suggest a crosslinkable poly(meth)acrylate or polyethylene/poly(meth)acrylate. Whether Aishima discloses a peroxide for use with other polymers is immaterial to the claimed invention because Aishima is not (1) in applicants' endeavour and (2) not pertinent to the problems (disclosed in paragraphs [004] to [007] of applicants' specification) with which applicants were concerned. There is no nexus between applicants' invention and Aishima disclosure. That is, one skilled in the art reading Aishima would not understand whether it can be used in a curable elastomer.

That is, there is no motivation or suggestion in the references to combine Siol and Aishima.

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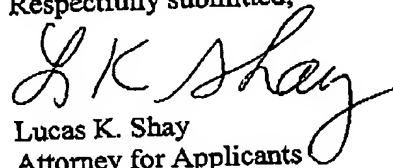
Secondly, even if Siol and Aishima could arguably be combined, Siol does not suggest claims 1, 7, 16, and 23 (as discussed above) from which claims 5, 11, 20, and 27 respectively depend, the question is whether Aishima suggest the elements missing in Siol.

As noted by the examiner, Aishima discloses 2,5-dimethyl-2,5-di(t-butylperoxy) hexyne as a peroxide among a long list of peroxides. However, Aishima does not suggest the blend and the process for producing the blend recited in the claims. That is, Aishima does not suggest the elements missing in Siol.

Therefore, combining Siol and Aishima does not render the claims obvious.

Claims 6, 12, 21, and 28 were objected to and would be allowed if rewritten in independent form. However, as discussed above, applicants in good faith believe that all other claims are unobvious over the references relied on by the examiner. Accordingly, these claims are not rewritten in independent form.

Respectfully submitted,



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